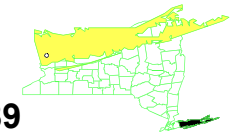
SMITHTOWN GROUNDWATER CONTAMINATION

NEW YORK



EPA ID# NY0002318889

EPA REGION 2
CONGRESSIONAL DIST.12
Suffolk County
Smithtown

Site Description

The Smithtown Groundwater Contamination site is an area of contaminated groundwater which has impacted drinking water in the Town of Smithtown in a location that includes the Villages of Nissequogue and Head of the Harbor and the Hamlet of St. James. There are approximately 500 homes in the immediate vicinity of the site. Many homes in Smithtown use private wells for a potable water supply and septic systems for sanitary waste disposal. The site is situated south of Stoney Brook Harbor and east of the Nissequogue River. While the site is located in a residential area, active commercial areas are located within one mile to the east and south.

Site Responsibility: This site is being addressed through Federal actions.

NPL LISTING HISTORY
Proposed Date: 09/30/98
Final Date: 01/19/99

Threats and Contaminants

In April 1998, EPA sampled 295 homes in the Smithtown area in an effort to determine the extent of contamination. Analytical results from this sampling event indicated the presence of volatile organic compounds (VOCs), particularly perchloroethylene (PCE), and its breakdown products, in residential private wells. PCE is a solvent used in dry cleaning and metal cleaning operations and is the principal contaminant in the groundwater within the impacted area. PCE is considered a potential human carcinogen by the U.S. Department of Health and Human Services. A removal action level (RAL) of 70 parts per billion (ppb) for PCE has been exceeded in six private wells. Under the Superfund Program, if any contaminant concentration exceeds its RAL, EPA is authorized to take an immediate, short-term action to address that contamination. In addition, private wells had detectable concentrations of VOCs above the maximum contaminant level (MCL) of 5 ppb for PCE. MCLs are the maximum permissible levels of a contaminant that may be present in water used for drinking purposes.

Contact with water containing VOCs, such as PCE, above the MCLs may cause an increased risk of adverse health effects from long-term exposure. Exposure to PCE can occur from ingestion of contaminated water, ingestion of food prepared with contaminated water, or inhalation of vapors from activities such as showering. The levels of PCE detected in residential wells above the RAL may pose an immediate threat to public health.

Cleanup Approach

This site is being addressed in two phases: Immediate actions to provide alternate water supplies and a long-term remedial phase focusing on the cleanup of the entire site.

Response Action Status

Immediate Actions: Based on the results of well water samples taken in April 1998, EPA initiated a Superfund Removal Action to supply bottled water to six residences with wells contaminated above the RAL. In June 1998, bottled water deliveries were expanded to include wells contaminated above the MCLs. These actions were taken to protect the health of the public until a more permanent solution can be implemented.

In the fall and winter of 1998-99 EPA took further action. Where a public water supply was available, the impacted residences were connected. This included installing the service line from the water company's distribution system at the property line to the house and disconnecting the well. At homes where water mains were not available, EPA installed individual carbon treatment systems or upgraded existing household treatment systems to EPA specifications.

In the summer of 1999, EPA sampled water from approximately 120 homes in the vicinity of the contamination identified by the previous studies. The samples collected in the summer of 1999 identified three additional homes with PCE levels exceeding the MCL. EPA addressed those three homes also by providing connections to the public water system.

In May/June 2001, private well water was sampled at approximately 75 homes as part of the ongoing groundwater investigation. Results from well water samples showed two additional residential wells with PCE at a concentration above or equal to the federal and New York State (MCL). EPA addressed those two homes also by providing connections to the public water system.

To date EPA has addressed 39 private wells with PCE levels above or equal to 5 ppb by connecting the well owners to the public water supply or installing a water treatment system in individual properties where public water mains are not available.

Entire Site: The Remedial Investigation/Feasibility Study (RI/FS) investigation is currently being performed by EPA. The RI involves gathering groundwater, surface water, sediment and hydrogeological data needed to determine the nature and extent of contamination at the site and the FS involves evaluating appropriate alternatives to address the contamination. Due to the large areal extent of contamination, the RI/FS will be performed in two phases. The initial phase of the RI will better define the extent of contamination and determine if any additional immediate remedial actions, such as providing alternate water supplies to additional homes, is needed. The goal of the second phase of the RI/FS is to identify the sources of groundwater contamination and evaluate several alternatives to address the contamination and it sources.

Cleanup Progress

EPA expects to complete the initial phase of the RI/FS process by the end of 2002 and complete the second phase of the process and select a final cleanup remedy for the site in 2003.

Site Repository

Copies of site related documents are available at:

Smithtown Library
1 North Country Road
Smithtown, New York
(631) 265-2072